

REMARKS

Reconsideration of the application, as amended, is respectfully requested.

Claim 1, line 2 has been amended to delete "triglyceride." Claim 1 has also been amended to recite in the last line that the sterilization occurs at a temperature of around 110°C or higher. This is supported in paragraph [0020] of the published application, especially lines 1-7 of that paragraph. New claim 15 recites that the suspension has been sterilized at a temperature of over 120°C and is supported at paragraph [0021].

Claim 1 has also been amended to incorporate the limitations of claim 2. Claim 2 has been amended as supported at paragraph [0023].

Claim 1 has further been amended to recite the viscosity of the suspension, as supported at paragraph [0024].

New claim 16 is supported at paragraph [0058]. New claim 17 is supported at paragraph [0032].

As is discussed in the specification, one of the problems which has been encountered with ultra high temperature sterilization treatments is gelation, also referred to as age thickening. The present invention is directed to the discovery that the addition of a small amount of emulsifier reduces the gelation of sterilized protein containing suspensions.

Auriou et al., WO 02/065859 discloses that phytosterols can be dispersed at high concentrations in an aqueous medium by inclusion of a non-sterol emulsifier having a

higher HLB value. Auriou's invention is said to be directed to a new technique allowing unprecedentedly large amounts of phytosterols to be dispersed in an aqueous medium without causing adverse effects on mouthfeel. Their process comprises mixing particulate phytosterol with an aqueous medium with the presence of a non-sterol emulsifier having an HLB value higher than that of the phytosterol. The combined HLB value of the non-sterol emulsifier and the phytosterol in the aqueous phase does not exceed 8. In a second aspect of the invention, a non-sterol emulsifier having an HLB value of at least 7 is used.

Claim 17 recites that the monoglyceride has an HLB of 1 to 6. Auriou et al.'s neutralizing non-sterol emulsifier has an HLB value usually in the range of 6-20.

The Office points to no teaching by Auriou et al. that their phytosterol composition is sterilized at a temperature of around 110°C or above, as presently recited in claim 1. Rather on page 12, Auriou et al. mention addition to hot water (60°C to 85°C) and maintaining the aqueous medium containing phytosterol and non-sterol emulsifier at a temperature of between 60°C and 100°C. On page 13 they mention that further processing of the emulsion depends on the intended use of the emulsion and that for preparation of margarine spreads and the like the emulsifying step is followed by pasteurization, said to be a standard procedure in the art.

Even less does the Auriou et al. reference suggest an aqueous suspension which has been sterilized at a temperature of over 120°C as recited in new claim 15. In addition, although they glibly mention a broad stabilizer/thickness range on page 11, since a purpose of Auriou et al. is to be able to use high levels of certain thickeners (paragraph [0027]), the subject matter of claim 11 is not suggested. (See Auriou et al.'s Example 2).

Not only does the Office not find any teaching of sterilizing at 110°C or higher, particularly at higher than 120°C (present claim 15), the Office points to no solution to the problem of sterilization gelling. Thus, the present specification demonstrates the unexpected advantage of the sterilized suspensions according to the invention. The Office points to no teaching of that advantage in the art. Nor does the Office point to any teaching in the art of the elements recited in claim 12.

The Office appears to argue that the non-gelation effect recited therein would be inherent in Auriou since "amounts such as 1%" are obvious, according to the Office. It is not clear what the 1% is that the Office refers to; therefore it is respectfully requested that the rejection be withdrawn or clarified. Moreover, the Office appears to assert that the reference as modified to make it obvious would inherently have the recited features. It is submitted that this is improper. An unexpected feature of a modified reference would be an unexpected advantage and would lend support to non-obviousness. The Office has not established that the reference has the features of claim 12 and therefore a prima facie case has not been made out for this reason as well.

While the Office points out that Auriou et al. mention the importance of maintaining a temperature of 80°C or higher during dissolution of phytosterols in fats and oils, they also mention that at 80°C and above commonly used fats and oils are vulnerable to oxidation. Therefore, the cited paragraph cannot be taken as a teaching to heat above 110°C.

In view of the foregoing, it is respectfully requested that the application, as amended, be allowed.

Respectfully submitted,

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